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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/808,998

03/25/2004

Joseph W. Stellbrink

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06/23/2006

EXAMINER

VO, ANH T N

HEWLETT PACKARD COMPANY

P O BOX 272400, 3404 E. HARMONY ROAD

INTELLECTUAL PROPERTY ADMINISTRATION

FORT COLLINS, CO 80527-2400

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/808,998

Applicant(s)

STELLBRINK ET AL.

Examiner

Anh T.N. Vo

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 12, 19, 28, 34, 36-38, 42 and 48-58 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 5-11, 13-18, 20-27, 29-33, 35, 39-41, and 43-47 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/25/2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

The references cited on PTO 1449 have been considered.

Specification

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The specification is objected to in that the serial number as mentioned at page 1 should be provided. Correction is required.

Claim Objection

Claims 12-13, 15 and 58 are objected to because of the following informalities: “the mass” on line 1 of claim 12 should be changed to --a mass--, “the first portion” on line 1 of claim 15 should be changed to --a first portion--, “the material” on line 3 of claim 18 should be changed to --a material--, “the outer” on line 4 of claim 35 should be changed to --an outer--, and “the formation” on line 6 of claim 58 should be changed to --formation-- for proper support. Correction is required.

Claim Rejections

Claim Rejections - 35 USC § 112

Claims 1-58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction or clarification is required.

In claim 1, it is unclear what the “fluid supply media” on line 3 is, how the media can supply fluid and where the fluid comes from. The same is true for claim 37.

In claim 10, the recitation “material” on line 1 is confusing because it is unclear if this is additional “material” or further recitation of the previously claimed “material” on line 2 of claim 2. The same is true for reciting “a lamellae inhibiting agent” on line 3 of claims 13 and 32 and “outer” on line 4 of claims 35 and 52.

In claim 12, the recitation “the mass” is unclear, and as such indefinite. It is unclear where it comes from and how the recitation “mass” and “plurality of lengths” is read on the preferred embodiment. Insofar as understood, no such mass and lengths are seen on the drawings. The same is true for claim 37.

In claim 18, it is unclear what the “minimum quality” and “maximum quality” on lines 2-3 are and how the agent can have both minimum and maximum qualities and where the “material” and “fluid” on line 3 comes from. The same is true for claim 47.

In claim 19, it is unclear how the agent can be exposed along each pore and where the pore comes from.

In claim 28, it is unclear how one length can be non-symmetrical cross-sectional shape since the length is only a dimension of the media.

In claim 56, it is unclear how the agent can be “retained” relative to the material.

In claim 57, it is unclear what the “lamellae” is, where it comes from, how it can be “formed” since the material cannot form the lamellae by itself, how the “means” on line 4 can “coupled to the material and how this limitation is read on the preferred embodiment or seen on the drawings.

In claim 58, it is unclear how the fluid can contact the pores with an agent, what the “discharge location” is, where the agent comes from, how the material can “wick” the fluid through the reservoir” and how this limitation is read on the preferred embodiment or seen on the drawing.

The remaining claims are rendered indefinite due to the deficiencies of claim 1 as stated above.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 12, 19, 28, 34, 36-38, 42, 48-51 and 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanada et al (US 6,692,115) in view of Lee et al (US 2003/0047109).

Sanada et al discloses in Figures 1-2, 16A-16D and 18A-18C a printing device comprising:

- a carriage (119);
- an ink tank unit (9) comprising a reservoir for storing ink;
- a fluid supply media (10) within the reservoir;
- a fluid dispensing device (head cartridge) dispensing ink on a medium (114, Figure 1)
- wherein the media including at least one length of at least one material and wherein the mass of the media (10) including a plurality of lengths since it has the rectangular shape.

However, Sanada et al does not disclose a lamellae inhibiting agent.

Nevertheless, Lee et al suggests in the Abstract that an inkjet ink comprising an agent such as organo-phosphonic acid or sodium or potassium salt for reducing scale formation.

It would have been obvious to a person having skill in the art at the time the invention was made to employ the inkjet ink suggested by Lee et al in the printing device of Sanada et al for reducing scale formation. Noted that when the ink of Lee et al is used in the ink tank of Sanada

et al, the organo-phosphonic acid or sodium or potassium salt would contact and be absorbed into the media (10) to reduce the formation of scale (lamellae).

With regard to claim 19, the media (10) of Sanada et al includes pores (Figure 16B) and the agent would be exposed along pores.

With regard to claim 28, although Sanada et al does not suggest that one length of the media (10) is non-symmetrical cross-sectional shape; however, a skilled artisan realizes that the size and shape of the media is determined by size and the shape of the ink cartridge. When the media does not have a rectangular or square shape, the lengths of the media will not be symmetrical. Thus, selecting the shape of the media of Sanada et al as claimed is considered to be a matter of a mechanical design for an engineer. It would have been obvious to a person having skill in the art at the time the invention was made to select the shape of the media as claimed for the purpose of accommodating with the shape of a predetermined ink cartridge.

Allowable Subject Matter

Claim 3 would be allowed if rewritten or amended to overcome the rejection under 35 USC 112, second paragraph, and included all of the limitations of the base claim. This claim is allowed because the prior art of record fails to suggest “wherein the lamellae inhibiting agent is intermittently disposed along the at least one length at a plurality of spaced locations”.

Claim 4 would be allowed if rewritten or amended to overcome the rejection under 35 USC 112, second paragraph, and included all of the limitations of the base claim. This claim is allowed because the prior art of record fails to suggests “wherein the at least one length is at least partially fluidphilic”.

Claims 5-9 would be allowed if rewritten or amended to overcome the rejection under 35 USC 112, second paragraph, and included all of the limitations of the base claim. These claims are allowed because the prior art of record fails to suggest “wherein the at least one length has a stripe of the lamellae inhibiting agent”.

Claims 10-11 and 43-44 would be allowed if rewritten or amended to overcome the rejection under 35 USC 112, second paragraph, and included all of the limitations of the base claim. These claims are allowed because the prior art of record fails to suggest “wherein each length of material includes: a hub; and a plurality of lobes extending from the hub and terminating at ends, wherein the ends carry the lamellae inhibiting agent”.

Claims 13-15 would be allowed if rewritten or amended to overcome the rejection under 35 USC 112, second paragraph, and included all of the limitations of the base claim. These claims are allowed because the prior art of record fails to suggest “wherein a first portion of the lengths include the lamellae inhibiting agent and wherein a second portion of the lengths omit an lamellae inhibiting agent”.

Claims 16 and 46 would be allowed if rewritten or amended to overcome the rejection under 35 USC 112, second paragraph, and included all of the limitations of the base claim. These claims are allowed because the prior art of record fails to suggests “wherein the lamellae inhibiting agent is a solid”.

Claims 17 and 45 would be allowed if rewritten or amended to overcome the rejection under 35 USC 112, second paragraph, and included all of the limitations of the base claim. These claims are allowed because the prior art of record fails to suggest “wherein the lamellae inhibiting agent is selected from a group including: fluidphobic silica, fluidphobic fat, fluidphobic wax and fluoropolymers”.

Claims 18 and 47 would be allowed if rewritten or amended to overcome the rejection under 35 USC 112, second paragraph, and included all of the limitations of the base claim. These claims are allowed because the prior art of record fails to suggest “where the media includes a fluidphilic material and wherein the lamellae inhibiting agent has a minimum quantity to limit lamellae formation on the material, and a maximum quantity that allows uptake of fluid by the material”.

Claim 20 would be allowed if rewritten or amended to overcome the rejection under 35 USC 112, second paragraph, and included all of the limitations of the base claim. This claim is allowed because the prior art of record fails to suggest “wherein the media includes at least one length having a mixture of fibers, wherein only a portion of the fibers carry the lamellae inhibiting agent”.

Claims 21-27 and 29-33 would be allowed if rewritten or amended to overcome the rejection under 35 USC 112, second paragraph, and included all of the limitations of the base claim. These claims are allowed because the prior art of record fails to suggest “ wherein the media is configured to receive a fluid having a surface tension and wherein the agent has a surface energy at least 5 dynes per centimeter less than the surface tension”.

Claim 35 would be allowed if rewritten or amended to overcome the rejection under 35 USC 112, second paragraph, and included all of the limitations of the base claim. This claim is allowed because the prior art of record fails to suggest “wherein the fluid supply media includes at least one length of material having an axial center and an outer circumferential surface, wherein the lamellae inhibiting agent extends along the center and along a first portion of the outer circumferential surface and wherein a second portion of outer circumferential surface includes a fluidphilic material”.


Claims 39-41 would be allowed if rewritten or amended to overcome the rejection under 35 USC 112, second paragraph, and included all of the limitations of the base claim. These claims are allowed because the prior art of record fails to suggest “wherein the lamellae inhibiting agent is intermittently disposed along the at least one length at a plurality of spaced locations”, .

Claims 52-55 would be allowed if rewritten or amended to overcome the rejection under 35 USC 112, second paragraph, and included all of the limitations of the base claim. These claims are allowed because the prior art of record fails to suggest “wherein a first portion of plurality of lengths includes the lamellae inhibiting agent and wherein a second portion of the plurality of lengths omit an lamellae inhibiting agent”.

Art Unit: 2861

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo whose telephone number is (571) 272-2262. The examiner can normally be reached on Tuesday to Friday from 9:00 A.M. to 7:00 P.M.. The fax number of this Group 2861 is (571) 273-8300.



ANH T.N. VO
PRIMARY EXAMINER
June 21, 2006